

CLAIMS

1. An electron beam emitting apparatus comprising
a first plate in which an electron-emitting device is
provided, and an electrode opposed to the first plate,
5 the electrode being applied a potential to accelerate
electrons emitted from said electron-emitting device,

wherein a potential defining region is provided on
a said-electrode-side surface of said first plate and a
first potential defining region forming said potential
10 defining region is provided within a projective area of
said electrode onto said potential defining region and
wherein, where d is a distance between said electrode
and said potential defining region and a marginal area
to be potential-defined is defined within a range of
15 $0.83d$ in all directions parallel to said first plate
from the edge of the projective area of said electrode
onto said potential defining region, an additional
potential defining region is provided in almost all the
marginal area to be potential-defined.

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2. The electron beam emitting apparatus according
to Claim 1, wherein, where a marginal area to be
potential-defined is defined within a range of d in all
the directions parallel to said first plate from the
25 edge of the projective area of said electrode onto said
potential defining region, said additional potential
defining region is provided in almost all the marginal

area to be potential-defined.

3. The electron beam emitting apparatus according to Claim 1 or 2, wherein said electrode is provided on
5 a second plate opposed to said first plate and said electrode is provided in a range extended by at least a distance $2\alpha d$ (where α is a number not less than 0.6 and not more than 1) in all directions parallel to said
10 second plate from the edge of an irradiated area which electrons emitted from said electron-emitting device irradiate.

4. The electron beam emitting apparatus according to any one of Claims 1 to 3, wherein at least part of
15 said potential defining region is comprised of an electroconductive plate placed between said first plate and said electrode.

5. The electron beam emitting apparatus according to any one of Claims 1 to 4, wherein said electron beam
20 emitting apparatus comprises a plurality of said electron-emitting devices.

6. The electron beam emitting apparatus according to Claim 5, wherein said plurality of electron-emitting
25 devices are arranged in a matrix pattern.

7. The electron beam emitting apparatus according to any one of Claims 1 to 6, wherein said electron-emitting device is a cold-cathode emission device.

5 8. An image-forming apparatus comprising the electron beam emitting apparatus as set forth in any one of Claims 1 to 7, and a fluorescent body, which emits light under irradiation with electrons emitted from the electron-emitting device of the electron beam
10 emitting apparatus.